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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,020	10/31/2003	Yiming Ye	SOM920030004US1	2131

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EXAMINER	
PATS, JUSTIN	

ART UNIT	PAPER NUMBER
3623	

NOTIFICATION DATE	DELIVERY MODE
09/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mld@mindspring.com

Office Action Summary	Application No.	Applicant(s)	
	10/699,020	YE ET AL.	
	Examiner	Art Unit	
	Justin M. Pats	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-12 and 15-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9-12 and 15-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Notice to Applicant

1. In view of the appeal brief filed July 6, 2009, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

2. The following is a non-final office action. In response to Examiner's communication of 2/9/09, Applicant, on 4/28/09, filed a notice of appeal, and on 7/6/09, filed an appeal brief. In light of prosecution having been reopened, claims 1–7, 9–12, 15–19 are pending in this application and have been rejected below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1–7, 9–12, 15–19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matheson (U.S. 7,184,940) in view of a public use of Microsoft Project 2002 [hereinafter Project 2002], as evidenced by Pyron, *Special Edition Using Microsoft Project 2002*, Que Publishing, August 5, 2002, pg. 1–47, further in view of Szeliski and Shum, *Motion Estimation with Quadtree Splines*, Digital Equiipment Corporation Cambridge Research Lab, March 1995, pg. 1–36 [hereinafter Szeliski].

5. As per claim 1, Matheson discloses a computer-implemented method (for discussion as to well known nature of computer implementation in the art, see at least Matheson, col. 1, lines 17–21; col. 7, lines 49–59; col. 10, lines 20–23) of managing at least one collaborative process performed in accordance with a first entity and at least a second entity, the method comprising the steps of:

a computer obtaining information associated with the at least one collaborative process used to design and develop a product (col. 2, lines 39-46; A collaboration object model captures various information related to an online meeting (i.e., collaborative process); *see also* Fig. 3, Product Requirement, ProductIdea objects; Fig. 4, ProductRequirementDecision,

ProductRequirement, ProductSpecification; ProductFunction, ProductFunctionDecision, ProductIdea objects); and

based on at least a portion of the obtained information, the computer dynamically maintaining an information structure representative of the collaborative process so as to assist at least one of the first entity and the second entity in managing at least a portion of the collaborative process (col. 2, lines 39-46; col. 4, lines 28-32; Figure 2; The collaboration object model is an information structure.).

Matheson further teaches wherein the information structure comprises a hierarchical structure (Figures 3-5 represent relational design structures as many of the objects have one to many relationships.) and updating one or more check points associated with the information structure (check points are inherent to relational object models as certain objects cannot exist before other objects. For example, in Figure 4 a design issue is encapsulated by (and cannot exist before) a design representation. Col. 6, lines 11-19) but does not explicitly disclose the remaining limitations of claim 1. Project 2002, in the analogous art of collaborative process monitoring and tracking, teaches wherein the context hierarchical structure provides a representation of the status of the collaborative process including one or more global and local tasks (Pyron, pg. 32–33, Fig. 15.1, displaying the hierarchy of tasks and subtasks, as well as the status of each task and subtask), and comprises results of a time offset calculation (*id.* Table 15.1, On Schedule indicator), a checkpoint calculation (*id.* Table 15.1, for example, Complete status indicator, however, all status indicators are arguably checkpoint calculations) and a potential energy level calculation (*id.*, Table 15.1, Late Status indicator) for the one or more global and local tasks involved in the collaborative process. It would have been obvious to one of

ordinary skill in the art to modify Matheson to include the teaching of Project 2002 for the benefit of improved efficiency by structured tracking of a project's status. Furthermore, the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Neither Matheson not Pyron explicitly teach wherein the information structure is a *context pyramid structure*. However, context pyramid structures and their use in data representation and analysis are old and well known in the art, as evidenced at least by Szeliski, in the analogous art of multi-resolutional and dimensional information visualization (pg. 10–11, Fig. 3, showing a multi-resolutional pyramid structure comprising three levels of data comprising nodes ranging from coarse to fine in terms of degree of resolution or granularity). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Matheson in view of Pyron to include the teaching of Szeliski because context pyramid structures enhance a user's view of to the current status of data, enabling them to better pinpoint progress and inefficiencies and make adjustments therefrom.

6. As per claim 2, Matheson discloses the method of claim 1, further comprising the step of incorporating annotated business data into the information structure (col. 4, lines 28-52; A meeting plan object and conversation object include annotated business data as part of the collaboration object model.).

7. As per claim 3, Matheson discloses the method of claim 1, further comprising the step of incorporating annotated design data into the information structure (Figure 3 represents an annotated design for data of the collaborative object model.).

8. As per claim 4, Matheson discloses the method of claim 1, further comprising the step of controlling data flow associated with the at least one collaborative process based on the information structure (col. 5, lines 14-36; Figure 3 illustrates the data flow associated with a collaborative session.).

9. As per claim 5, Matheson discloses the method of claim 1, further comprising the step of fetching one or more design data features for at least one of monitoring and tracking the at least one collaborative process (col. 6, lines 43-59).

10. As per claim 6, Matheson discloses the method of claim 1, wherein the at least one collaborative process is a business process (col. 5, lines 14-36; A meeting is a business process.).

11. As per claim 7, Matheson discloses the method of claim 1, wherein the at least one collaborative process is an engineering design process (col. 5, lines 37-37-65; A meeting may include a discussion on product design requirements.).

12. As per claim 9, Matheson discloses the method of claim 1, wherein the information structure is multi-dimensional (Figures 3-5 represent relational design structures, or multi-dimensional structures, as many of the objects have one to many relationships.).

13. As per claim 10, Matheson in view of Pyron does not explicitly teach wherein the information structure is multi-resolution. However, Szeliski teaches this (*see* discussion *supra* ¶ 5). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Matheson in view of Pyron to include the teaching of Szeliski (*id.*).

14. As per claim 11, Matheson discloses the method of claim 1, wherein the obtained information comprises annotated data (Figure 3; The meeting discussion includes conversations from the meeting, which is annotated data.).

15. As per claim 12, Matheson discloses the method of claim 1, wherein the obtained information comprises user input (col. 6, lines 43-48; Information discussed during a collaboration meeting includes data that is captured, modified and accessed by all meeting participants.).

16. As per claim 13, Matheson discloses the method of claim 1, wherein the step of maintaining the information structure further comprises updating one or more check points associated with the information structure (Check points are inherent to relational object models

as certain objects cannot exist before other objects. For example, in Figure 4 a design issue is encapsulated by (and cannot exist before) a design representation. Col. 6, lines 11-19).

17. As per claim 15, Matheson discloses the method of claim 1, further comprising the step of analyzing at least one of the obtained information and the information structure (col. 7, lines 49-59; The decision tracking object model allows decision analysis to be performed using user supplied questions, answers and product design issues.).

18. As per claim 16, Matheson discloses the method of claim 15, further comprising the step of generating one or more action representations based on the analyzing step (items 290 and 280 in Figure 3; Action items and commitments are generated.).

19. As per claim 17, Matheson discloses the method of claim 16, wherein the analyzing step is rule-based (The analyzing step is rule-based in that object-oriented relational database design requires that certain objects exist before others. Figure 3 illustrates a rule showing that Actors (i.e., meeting participants) make Commitments and Commitments ensure ActionItems.).

20. Claims 18–19 represent corresponding apparatus and article of manufacture claims to the claims already rejected above. Therefore, claims 18–19 are rejected on the same basis as claims 1–13 and 15–17 above.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Li et al., Multimedia Content Description in the InfoPyramid, IBM T.J. Watson Research Center, IEEE, 1998, pg. 3789–3792 (disclosing an multi-dimensional, multi-resolutional data structure called an InfoPyramid which aggregates data with rules, descriptions, and methods for handling the data, describing data in different modalities)

B. Falby et al., *NPSNET: Hierarchical Data Structures for Real-Time Three Dimensional Visual Simulation*, Computer & Graphics, Vol. 17, No. 1, pg. 65–69, 1993 (online reprint pg. 1–13) (disclosing various hierarchical data structures including a multi-resolution quadtree).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Pats whose telephone number is (571)270-1363. The examiner can normally be reached on M-F, 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on 571-272-6738. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin M Pats/
Examiner, Art Unit 3623